

Grid Scored

Main feature: Formable

OD30 is a linear scored material in one direction of the sheet, which makes it formable in one direction only.

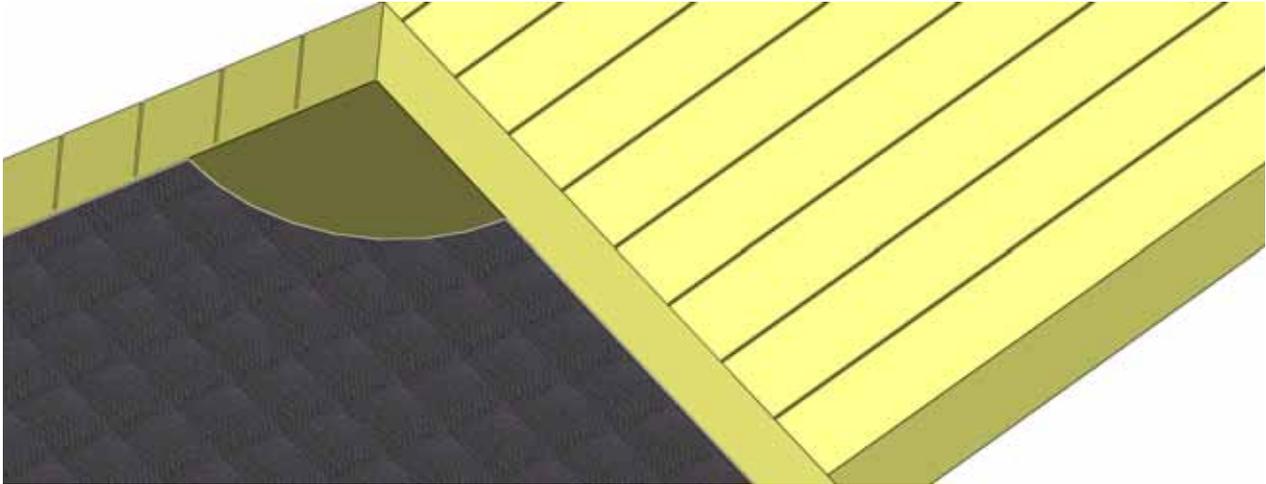


Figure 1: OD30

Description

The sheet has U-shaped cuts in length direction of the sheet almost all the way through the core. To reinforce the sheet a light weight fiberglass scrim fabric is used on the opposite side of the cuts.

Typical measurements:	
Center-to-center	30mm
Width (W)	~0.9mm, U-shaped cut

OD30 is available in most grades and thicknesses.

Benefits

- Easy and robust to handle
- Reduced resin consumption
- Formable

OD30 is very beneficial in applications which are single curved due to the considerable savings in resin it yields.

This finishing can be used on its own in combination with external flow medias or in combination with other suitable finishes in closed molding manufacturing processes.

Typical applications

- Wind Blades
- Single curved applications

Process characteristics

The material has cuts in one direction only, thus making it formable in one direction only. The main purpose of the cuts is to make it formable and should not be confused with infusion grooving.

In infusion or other vacuum resin transfer molding processes OD30 can be combined with other finishing options to secure a good wet out of the surface of the core, alternatively flow meshes or flow mats are used in combination.

The preferred way to turn the OD30 down in a laminate or mold is to enable it to close the grid scores, which reduces resin uptake, decreases exothermic peaks and decreases risk of surface printing.

Compared to grid scored material the resin flow speed in closed molding processes will be slower if the resin flow is in the transverse direction of the cuts, however this can be a desired behavior in some applications or processes.

Limitations and considerations

If the core is placed correctly in the mold, as described in process characteristics, the grid scores will be closed or next to closed.

If the core is not placed correctly, the curvature grooves will be opened/widened, creating gaps which will be filled up with resin and creating race tracks in resin transfer molding processes.

Finishing Solutions

DIAB utilizes a combination of its complete range of finishing options to provide an optimized solution based on customers' requirements and objectives. Should the standard range not fulfill the needs, tailor made cuts and solutions can be defined and developed. Normally this is not needed as the range of options and DIAB competence covers majority of needs in various industries.

Kits

To fully optimize the application for cost, performance and quality DIAB can engineer and design a core kit delivered in lay-up sequence. The kit of precut pieces is optimized for mechanical requirements, lay-up, manufacturing process, cost and quality objectives. The kit is produced by our skilled personnel using a combination of traditional and CNC equipment to achieve the desired result.

By working with kits our customers gain access to the full competence of DIAB in terms of engineered design, core materials and range of manufacturing techniques, all having a profound impact on the ability to reach the objectives of the application from cost, quality and performance point of view.

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